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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,552	03/12/2004	Jan Mulder	1875.2910001/JTH/TAD	6478

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EXAMINER

NGUYEN, LINH V

ART UNIT PAPER NUMBER

2819

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/798,552

Applicant(s)

MULDER ET AL.

Examiner

Linh V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-18 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 19, 20, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is in response to applicant preliminary amendment received on 03/12/04. Claims 1 – 13 have been canceled. Claims 14 – 25 are pending on this office action.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14 – 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Adal U.S. Patent No. 5,825,239.

Regarding to claim 14, Fig. 6 disclose an array of comparators, a method for increasing a rate at which a comparator (200) in a metastable condition transitions to a steady state (Col. 1 lines 23 – 28), comprising the steps of : identifying, in the array of comparators (200, 250, 260), the comparator (200) in the metastable condition; and (2) providing a bias current (280) to said identified comparator (200) in the metastable condition, such that the rate at which the comparator in the metastable condition transitions to the steady state is increased state (Col. 1 lines 23 – 28).

Regarding to claim 15, wherein said providing step comprises the step

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of : controlling a current output from a variable current source (280) that provides the bias current for a latch circuit (285, 290) of said identified comparator (200) in the metastable condition.

Regarding to claim 16, wherein said identifying step comprises the steps of: comparing (270) a characteristic of a first comparator (250) of the array of comparators with a characteristic of a second comparator (260) of the array of comparators, wherein the first comparator and the second comparator are separated in the array of comparators by a third comparator (200) in the array of comparators; and determining (270) if the third comparator (200) is the comparator in the metastable condition based on said compared characteristics.

Regarding to claim 21, Fig. 6 of Adal discloses an array of comparators that includes a first (250), a second (260), and a third comparator (200), a method for increasing a rate at which the third comparator transitions to a steady state (Col. 1 lines 23 – 28), comprising the steps of: comparing (270) an output of the first comparator (250) with an output of the second comparator (260); and providing a bias current (280) to the third comparator based on said compared first and second outputs.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17, 18, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adal as applied to claim 16 above and further in view of Reddy U.S. Patent No. 4,092,955.

Fig. 6 of Adal as applied to claim 16 above and further disclose an OR gate (270) for comparing the outputs of first (250) and second (260) comparators. However, Adal fails to disclose an Exclusive OR gate for comparing first and second comparators.

Fig. 1 of Reddy disclose a roughness sensor detecting circuit having an Exclusive OR gate (80) for comparing the outputs first and second comparators (60, 70).

Adal and Reddy are common subject matter of detecting by using logic gate for comparing the outputs of two comparators. Therefore, it would have been obvious to one having ordinary skill in the art the time the invention was made to modify the comparing OR gate of Adal with the comparing Exclusive OR gate taught by Reddy for the purpose of providing just one but not both or either comparator output is passed by Exclusive OR gate to speed up normalization (Reddy Col. 2 lines 35 – 37).

Regarding to claim 18, Fig. 6 of Adal as modified by Reddy as applied to claim 17 above further discloses wherein said providing step comprises the step of: controlling a current output from a variable current source (280) that provides the bias current for a latch circuit (285, 290) of said identified comparator in the metastable condition with an output of the Exclusive OR gate (modified by Reddy).

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***Allowabl Subject Matter***

5. Claims 19, 20, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (571) 272-1810. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (571) 272-1812. The fax phone numbers for the organization where this application or proceeding is assigned are (703-872-9306) for regular communications and (703-872-9306) for After Final communications.

LVN

06/30/2004

  
Michael Tokar  
Supervisory Patent Examiner  
Technology Center 2800